

were handled at this location. Groundwater, surface water, and soil are media of concern. The extent of contamination is undetermined. The RFI recommends further sampling to better define the extent of contamination in old trenches and groundwater.

Old Explosive Waste Burning Ground, SWMU 22 - The Burning Ground comprises approximately seven acres. This area consists of five burning trenches, an NG dump area, and a lead recovery area (SWMU 32). Unburned propellant solids containing lead salts and explosive compounds may be present. Contaminants of concern include metals and dioxin/furans. Groundwater, surface water, and soil are media of concern. The extent of contamination is undetermined. This site, along with SWMU 32, is the subject of a RCRA Corrective Measures Study which is underway. KDHE recommended development of a groundwater and surface water monitoring program for the site.

New Explosive Waste Burning Ground, SWMU 23 - The New Explosive Waste Burning Ground consists of a diked earthen pad measuring approximately one acre (130 x 340 feet). Waste NQ, GN, explosives, and propellants of various formulation have been burned and/or detonated at this site. Unburned propellant solids containing salts and NG may be present at the site. Other contaminants of concern are lead, phthalates, ordnance, and unknown compounds. Groundwater, surface water, and soil are media of concern. The extent of contamination is undetermined. Further sampling of soil for metals, explosives and dioxin has been conducted to satisfy the requirement for closure of SWMU 23 which is a RCRA regulated unit.

Contaminated Waste Processor/Evaporative Lagoon, SWMU 31 - The Contaminated Waste Processor (CWP) is an incinerator measuring approximately 40 x 60 feet. It was designed to incinerate materials contaminated or suspected of being contaminated with explosives, and to decontaminate (flash) explosive-contaminated metal prior to salvage. The Evaporative Lagoon is located northwest of the CWP and has an approximate size of 0.9 acres and is about 10 feet deep. The lagoon was designed to collect runoff from the storage area around the contaminated waste processor and wastewater from building washdown. Trace concentrations of explosives and propellant compounds such as NG, DNT, and soluble lead may be present after incineration. While these constituents would not be explosive, they may be soluble. There is evidence that metals may be of concern due to past activities at this site. Also, ordnance and unknown compounds may be present. Groundwater, surface water, and soil are media of concern. The extent of contamination is undetermined. The RFI recommends site remediation and follow up confirmatory sampling.

Lead Decontamination and Recovery Unit, SWMU 32 - The site encompasses approximately 0.5 acre, and consists of a small building and melting rack within a paved area. Lead is the primary constituent of concern at this site. It is somewhat soluble under acidic conditions. Heavy metals, SVOCs, dioxin/furans and ordnance compounds are contaminants of concern. Groundwater, surface water, and soil are media of concern. This site, along with SWMU 22, has a RCRA Corrective Measures Study underway. KDHE recommended groundwater monitoring and further sampling of sediment and water in Captain Creek. KDHE has noted that a base-wide Ecological Risk Assessment has been concluded at Sunflower.

Calcium Carbonate Cake Landfill, SWMU 41 - This landfill occupies approximately 2.5 acres. The source of CCC is NQ production. CCC is a byproduct of GN manufacturing, which is an intermediate product of NQ. CCC is the only waste reportedly landfilled at this site. Constituents present in CCC include calcium carbonate, calcium cyanamide, ammonium, nitrate, sulfate, GN, metals, and fluoride. Groundwater impacts by VOCs, SVOCs, and heavy metals are present. Groundwater, surface water, and soil are media of concern. The extent of groundwater contamination is undetermined. SWMU 41 requires remedial actions which have not yet begun. KDHE recommends further investigation to determine the extent of contamination in groundwater. Deficiencies in the landfill cap have recently been corrected.

Temporary Sanitary Landfill, SWMU 42 - The landfill is currently used to manage non-hazardous solid waste consisting of general trash with very little sanitary waste. This site is used for the disposal of non-hazardous substances from facility operations and it has been in operation since 1988 under Kansas State Solid Waste permit No. 340. Groundwater impacts by VOCs, SVOCs, and heavy metals have been identified. Groundwater, surface water, and soil are media of concern. The extent of contamination is undetermined. KDHE recommends further investigation to determine the extent of contamination in groundwater. Deficiencies in the landfill cap have recently been corrected.

Road Just Southeast of the Sanitary Landfill, SWMU 49 - Along the road located just southeast of the Sanitary Landfill is a steep slope, which upon an EBS inspection, revealed the presence of drums, construction rubble, and other refuse underlying the road. This road may have been built over a landfill. The types of wastes disposed at this site are unknown. The contaminants of concern at this site are also unknown. Groundwater, surface water, and soil are media of concern. The extent of contamination is undetermined. The RFI does not contain recommendations for future activities at this site. KDHE recommends further investigation.

Potential contamination areas identified during the EBS investigation, other than the SWMUs, include:

Elevated concentrations of copper occur in Roberts Lake. A property adjacent to Segment 6 is the University of Kansas landfill located along the western boundary of Sunflower, northwest of the Old Explosives Waste Burning Grounds. Segment 6 is upgradient from the University of Kansas landfill. Segment 6 is unlikely to be affected by hazardous substances in the landfill. The landfill property was previously part of Sunflower and was transferred to the University of Kansas.

Environmental Stabilization Program:

Structure A175-10 is scheduled for Phase II of the ESP.

Non-CERCLA related environmental, hazard, and safety issues:

Asbestos-containing materials: surveys conducted at two facilities found that they did not contain ACM. It is assumed that four other facilities may contain ACM because they were constructed prior to 1985.

Lead-based paint: facilities constructed prior to 1978 are assumed to contain LBP. None of the facilities have been surveyed. However, all facilities within Segment 6 may contain LBP based on Sunflower's 1978 construction guideline.

Remediation Activities:

Currently, there are no remedial activities in progress in Segment 6.

■ **Segment 7**

Segment 7, consisting of approximately 294 acres, contains a total of 183 facilities. Facility processes included the NG area, where NG was manufactured, and the Paste Area, where NC was blended with NG and other compounds to form the paste.

Previously identified areas of known and potential contamination:

SWMUs 24, 33, 34, and 35. The following paragraphs provide a summarized description of these areas.

Nitroglycerine Ditches, SWMU 24 - The slightly acidic rinse water, the soda ash wash, and the water used for cleaning the floors and equipment was discharged without treatment to the NG ditches. Each of the six NG production buildings has a drainage ditch that is a tributary for the main ditch. The unlined ditches drained into Kill Creek prior to construction of Pyott's Pond in 1968, after which they flowed into the pond.

The main ditch is approximately 1,300 feet long and between 3 to 12 feet deep. NG, metals, and acids could be expected in this area. Contaminants of concern are NG and lead. Investigations of SWMUs 24 and adjacent SWMUs 33, 34, and 35 have documented impacts to soil, sediment, and groundwater. There is also a potential that the sewer system in these areas is contaminated with reactive/ignitable compounds.

Groundwater, surface water, and soil are media of concern. The extent of contamination is undetermined.

SWMU 24 requires remedial actions which have not yet begun. Sewer removal and soil remediation are anticipated.

Paste Area Half Tanks and Settling Ponds, SWMU 33 - There are a total of ten steel half tanks clustered in two different locations: some are just northwest of the Paste Area (near the NG Settling Ponds), and others are just southeast of the Paste Area (between the 5 Corners Settling Ponds and the paste sump. Each tank has a capacity of approximately 8,000 gallons. The half tanks received wastewater from wash down of propellant processing equipment and buildings in the Paste Area, and possibly from buildings in the NG Area as well. There are two Settling Ponds at this site. The location of these ponds is not clear. The material collected in the half tanks consisted of partially colloided and colloided propellant solids containing lead salts. Releases to the Settling Pond included the main contaminants of concern: lead salts, NC, NG, and uncolloided propellant. The pond sediments were also thought to contain plasticizer, wax, and possibly some carbon black. The propellant N5 is a colloided form of the paste. Groundwater, surface water, and soil are media of concern. The extent of contamination is undetermined. (See SWMU 24, above.) SWMU 33 requires remedial actions which have not yet begun.

Five Corners Settling Ponds, SWMU 34 - This SWMU contains two, earthen, unlined ponds, each with the surface area of approximately 40 square feet. These ponds are referred to as Pond 5A (the southeastern pond) and Pond 5B (the northeastern pond). There are no containment berms surrounding these ponds. Partially colloided propellant solids and sludge containing lead salts have settled in these ponds. The *Installation Action Plan* reports that the ponds may contain contaminants of concern including: raw propellant, uncolloided propellant, soil, and paste containing NC, NG, plasticizer, wax, slightly acidic rinse water, soda ash wash, and possibly some carbon black. Groundwater, surface water, and soil are media of concern. The extent of contamination is undetermined. (See SWMU 24, above.) SWMU 34 requires remedial actions which have not yet begun.

Nitroglycerin Area Settling Ponds, SWMU 35 - There are two ponds, each with the surface area of approximately 30 x 40 feet. These ponds are referred to as Pond 6A (the southeastern pond) and Pond 6B (the northeastern pond). The ponds were used to receive wastewater resulting from the wash down of equipment and buildings, and from sprinkler trips. Contaminants of concern are partially colloided propellant solids and sludge containing lead salts which have settled in these ponds. Groundwater, surface water, and soil are media of concern. The extent of contamination is undetermined. (See SWMU 24, above.) SWMU 35 requires remedial actions which have not yet begun.

Potential contamination areas identified during the EBS investigation, other than the SWMUs, include:

The Hazard Analysis and Ballistics Laboratory (Facilities 300 and 302), used to test propellant, had a firing-range located within Facility 300. Inspections and interviews indicated some remediation of the firing range had occurred. The facility perimeter drains were directly connected to the storm sewer lines. Product from the NG and Paste Areas was washed into the sewer system. These materials have the potential to adhere to the interior of the sewage system and may pose a reactivity/ignitability hazard.

Environmental Stabilization Program:

The majority of the structures in Segment 7 have been demolished or are scheduled for demolition under Phase I of the ESP.

Non-CERCLA related environmental, hazard, and safety issues:

Asbestos-containing materials: a survey conducted at Facility 300 indicated the presence of ACM. All of the other facilities in Segment 7 were constructed prior to 1985; therefore, all other facilities may contain ACM.

Lead-based paint: None of the facilities have been surveyed. However, all 182 facilities within Segment 7 may contain LBP based on Sunflower's 1978 construction guideline.

Of the six facilities surveyed for radon, one was found to contain a radon concentration above 4.0 pCi/l.

Remediation Activities:

Visual inspections and interviews during the EBS indicated that some remediation of the firing range in Facility 300 had occurred. No other remediation activities are known to have occurred within Segment 7.

■ **Segment 8**

Segment 8, which consists of approximately 261 acres with 330 facilities, contained the NC Production Area, laboratory support, propellant mixing, forming areas, NQ support, and an above-ground storage tank farm area for the storing and dispensing of fuels and solvents.

Previously identified areas of known and potential contamination:

SWMUs 48 and 54. The following paragraphs provide a summarized description of these areas.

Nitroguanidine Support Area, SWMU 48 - The following structures are currently present in the NQ Support Area:

- Buildings 2000 and 2012 were a part of the pilot-scale production plant known as the NQ Support Equipment (NSE) facility. Building 2000 is currently used for various process engineering studies.
- Two dryer bays are on the west side of Building 2000. The northern bay was used for NQ and the southern was used for GN.
- Two 20,000-gallon above ground storage tanks are adjacent to the southwest corner of the GN dryer bay. One tank contained 44 percent ammonium nitrate, and the other contained about 10 percent GN.
- Four half tanks: two are located north of the NQ dryer bay and two are south of the GN dryer bay. Influent wastes were carried to these tanks by French drains from inside the NSE facility.
- Three sumps are located between Buildings 2000 and 2012. The south sump contained sulfuric acid wastewater, the middle sump contained calcium cyanamide wastewater, and the north sump contained calcium carbonate sludge, ammonium nitrate and GN.

Surface runoff from the NQ Support Area discharges to Pond A. According to Sunflower personnel, there is indication that NC production occurred at the NSE facility at one time. Wastes generated at the site included raw materials, manufacturing intermediates, NQ, constituents of byproducts and wastes, and environmental degradation products of these materials. The contaminants of concern are NQ and NG. Groundwater, surface water, and soil are media of concern. The extent of contamination is undetermined. There is a potential that sewer lines in the area have waste product in them which could pose a reactivity/ignitability hazard.

Fluorescent Tube Well. SWMU 54 – The fluorescent lamp disposal well/cistern is located east of the NQ production area. The site consists of a well/cistern as part of an old, pre-Sunflower homestead. The well is five feet in diameter, about 12 feet deep and has a concrete wall. The well has been used as a fluorescent lamp bulb disposal pit. It is uncertain when this occurred, but is suspected to have taken place prior to 1976. The well is uncovered and full of water.

A representative of the U.S. Army Center for Health Promotion and Preventative Medicine (CHPPM) visited the well site, collected soil and water samples and performed a relative risk site evaluation. The information will be used to determine the order in which corrective/remedial actions will be taken at the site. This site was determined as having a “medium” risk by CHPPM.

Potential contamination areas identified during the EBS investigation, other than the SWMUs, include:

The EBS revealed that there is evidence that operations in the single base propellant production lines may have resulted in the release of propellant components to the environment. Propellant components (diethylphthalate, lead salts, finely divided solvent based propellants, etc.) may have been released into storm sewers as a result of numerous activations of the fire suppression or deluge system. Propellants are most likely to be found in sumps, traps, and buried storm sewers not yet excavated. Fires in blenders, wringers, and mix houses may have resulted in water-borne releases. The EBS did not report previous investigations for the process areas in Segment 8.

Environmental Stabilization Program:

The majority of the structures in Segment 8 are scheduled in Phase I, II, or III of the ESP. Most of the structures scheduled in Phase I had been burned prior to the EBS site visit in June 1998. Contaminants may remain within subslab materials and subsoils and sewers within the perimeter of each structure. Non-CERCLA related environmental, hazard, and safety issues:

Asbestos-containing materials: surveys were conducted at eight facilities and all eight were found to contain ACM. All of the other facilities in Segment 8 were constructed prior to 1985; therefore all remaining facilities may contain ACM.

Lead-based paint: facilities constructed prior to 1978 are assumed to contain LBP. None of the facilities have been surveyed. However, 190 facilities within Segment 8 may contain LBP based on Sunflower's 1978 construction guideline.

Remediation Activities:

Interviews conducted as part of the EBS indicate that some remediation of the NC Production Lines B and C had occurred. Some sewers had reportedly been excavated and/or detonated in place prior to the EBS site inspection in June 1998. Some sewers had been removed and previously disposed. No other remedial activities are known to have occurred.

■ Segment 9

Segment 9, which was the area used for the manufacture of NQ, consisted of approximately 588 acres and contains 182 facilities. The following process areas are in Segment 9: calcium cyanamide facility, wet GN facility, dry GN facility, wet NQ facility, dry NQ facility, poach house, tank farm, sulfuric acid concentration plant, nitrogen house, and operations support facilities.

Previously identified areas of known and potential contamination:

SWMUs 27, 28, 44, 45, 47, NQ Solar Pond, and Waste Calcium Carbide Treatment Area. The following paragraphs provide a summarized description of these areas.

Nitroguanidine Area SAC Liquid Waste Treatment Plant, SWMU 27 - The plant consists of a 45,000-gallon tank for distillate and a 17,000-gallon tank for other corrosives. In addition, there are two Evaporative Lagoons south of the Liquid Waste Treatment Plant. The northernmost lagoon has an area of approximately 6.6 acres; the southern lagoon has an area of approximately 5.2 acres. The combined capacity of the lagoons is about 40 million gallons. Both lagoons are about 10 feet deep. The lagoons receive wastewater from the treatment plant. The waste streams from the SAC and the NQ area may contain NQ and GN. Lime sludge and acids may also be present. Sulfates and nitrates are contaminants of concern. Groundwater, surface water, and soil are media of concern. The extent of contamination is undetermined.

SWMU 27 has remedial actions underway. The Sunflower schedule for remediation of the lagoon sludge and dismantlement of the lagoons was approved by KDHE as a partial fulfillment of requirements for lagoon closure. Remediation of sludge included in-situ denitrification. Following remediation, the clay berms were spread out over the lagoon floor. Topsoil was brought in to cover and finish grading the lagoon area. An additional requirement to complete closure of the lagoons is groundwater monitoring at selected sites downgradient of the lagoons for a period of not less than 5 years and submittal of a final work plan for closure activities consistent with KDHE pond closure/sampling verification plan.

Waste Calcium Carbide Treatment Area, SWMU 28 - This site is a state regulated unit and it was approved for closure on July 1, 1987, in accordance with KDHE requirements.

Tank T784, SWMU 44 - Tank T784, also known as Structure 9049, is the northwest corner of the NQ Area (SWMU 27). This above ground, circular, metal wastewater collection tank holds cooling tower blowdown water, NQ crystallizer condensate, GN evaporator condensate, and non-contact cooling water. The tank has a capacity of 100,000 gallons. There are no spill containment structures for the tank. The wastewater in the tank is not normally contaminated. However, there is a potential for the wastewater to be acidic and/or contain elevated levels of nitrogen rich compounds. Metals are contaminants of concern. Groundwater, surface water, and soil are media of concern. The extent of contamination is undetermined. The RFI recommends no further action at this site because risk assessment calculations do not indicate risk to human health.

Building 9040 (Calcium Cyanamide Conveyors and Storage Unit), SWMU 45 - Building 9040, also known as the wet GN building, is in the central part of the NQ Area (SWMU 27). Calcium cyanamide is produced in Building 9004 and transferred via belt conveyor to Building 9040 for use in the GN process. The belt conveyor, which leads to the storage bins located on the East Side of Building 9040, is enclosed in a sheet metal galleyway elevated 25 feet above the ground. There are four 175-ton storage bins. Calcium cyanamide has been released at the bins because of problems with screw conveyors used to transport material from Building 9004. A concrete pad was constructed in a small portion of the area under the storage bins. The pad, however, is too small to effectively contain spillage, especially in windy conditions.

A drainage divide is located in the NQ Area running east of Building 9040 which separates the Captain Creek drainage area from the area drained by unnamed creeks flowing northward toward the Kansas River. As a result, Building 9040 drainage is divided between the two drainage systems in this area. Materials handled in this area such as calcium carbide, calcium cyanamide, and calcium fluoride (fluorspar) are constituents of wastes generated at this site. NQ, GN, nitrates and sulfates are contaminants of concern. Groundwater, surface water, and soil are media of concern. The extent of contamination is undetermined. SWMU 45 requires remedial actions which have not yet begun. Soil remediation and long-term groundwater monitoring are anticipated.

Nitroguanidine Production Area (23) Sumps, SWMU 47 - The main facilities in the NQ plant include the following six buildings:

- Wet GN building (Building 9040);
- Dry GN building (Building 9041);
- SAC plant (Building 904);
- Wet NQ building (Building 9042);
- Dry NQ building (Building 9043); and
- Pack house (Building 9017).

All of these buildings have associated sumps designed to receive the wastewater generated in the NQ Area. Most of the sumps are below-grade circular or rectangular basins of either concrete or rubberized-asphalt earthen construction of varying sizes. In general, the wastewater from these sumps is removed by tank truck and transported to the South Acid Area LWTP, although some sumps are used as intermediate holding tanks prior to pumping to the ammonia stripper for recycling. Materials used in the production of NQ include calcium carbide, calcium fluoride (fluorspar), nitrogen, ammonia, nitric acid, and sulfuric acid.

Wastewater may be acidic or basic as a result of neutralization with sodium hydroxide. It may potentially contain contaminants such as NQ, and GN, as well as raw process materials or intermediates of the NQ process. Nitrates, ammonia, and cyanide may also be present. Other contaminants of concern include various unknown compounds. Groundwater, surface water, and soil are media of concern. The extent of contamination is undetermined. SWMU 47 requires remedial actions which have not yet begun. Soil remediation and long-term groundwater monitoring are anticipated. The RFI recommends additional sampling.

Potential contamination areas identified during the EBS investigation, other than the SWMUs, include:

The EBS investigation found evidence that NQ contamination is pervasive throughout all processing facilities. Numerous spills of NQ, acids, calcium cyanamide, and various POLs have been reported, but were not identified with a particular SWMU. NQ was observed in several areas oozing out of walls and floors during the 1998 EBS visual inspection of the area. The NQ solar pond was considered an unlikely source of contamination because it had never received wastewater, was lined, and in good condition.

Sites associated with NQ production process were potential sources for the following compounds: NQ, calcium cyanamide, calcium carbide, calcium fluoride, GN, ammonium nitrate, ammonia, calcium carbonate, nitric acid, and sulfuric acid.

Environmental Stabilization Program:

No ESP activities are planned for the structures in Segment 9.

Non-CERCLA related environmental, hazard, and safety issues:

Asbestos-containing materials: surveys were conducted at nine facilities, with three facilities found to contain ACM. Of the 173 facilities not surveyed for ACM, 70 facilities may contain ACM as construction was prior to 1985.

Lead-based paint: Facilities constructed prior to 1978 are assumed to contain LBP. None of the facilities have been surveyed. However, all 182 facilities within Segment 9 may contain LBP based on Sunflower's 1978 construction guideline.

One transformer located north of Facility 9031 was reported to have a PCB concentration greater than 50 ppm.

Remediation Activities:

Sunflower submitted a work plan to the KDHE in February 1996 for remediation of the SAC Waste Treatment Plant/SAC Evaporation Lagoon (SWMU 27) sludge and dismantlement of the lagoons. Remediation activities were observed during the EBS site investigation in June 1998. Groundwater monitoring downgradient of the lagoons for a period of not less than five years and submittal of a final work plan for closure are also required to complete closure of the lagoons.

8. Aesthetics

Sunflower was once part of the agricultural and prairie landscape that is typical of northeastern Kansas, and contains no distinguishing topographic or vegetation features. Given the gently rolling terrain of the sizeable property, different portions of the site are visible from surrounding properties, while other portions of Sunflower offer vantage points of off-site locations. However, views available to and from Sunflower are not considered unique within Johnson County. Appendix D contains photographs representative of the natural and developed landscape in and around Sunflower.

The Roberts House, which is eligible for inclusion on the National Register of Historic Places (see Section III.A.6, Historical and Archeological Resources), is located at the edge of Roberts Lake and provides a pleasing aesthetic contribution to Sunflower. This structure is currently known within Sunflower as the Recreation Building (FH-3).

The only other notable man-made contributions to the viewshed around Sunflower are the numerous water towers on the site. The four white towers by the main entrance to Sunflower, by virtue of their elevation, location and clustering, particularly stand out, and can be seen from miles around. While the structures themselves do not appear to be unique examples of water tower design, they offer an iconic value and point-of-reference within the local context.

B. COMMUNITY AND REGIONAL CHARACTERISTICS

1. Population/Employment

a. Regional Perspective

Sunflower is located approximately 31 miles west/southwest of downtown Kansas City, in the northwestern corner of Johnson County. Johnson County is part of the eleven-county Kansas City (Kansas and Missouri) Metropolitan Statistical Area (MSA), and adjacent counties include Leavenworth and Wyandotte to the north, Jackson and Cass (both in Missouri) to the east, and Miami to the south. Each of these counties is also

within the Kansas City MSA. Sunflower is also about one mile from the border of Douglas County, which borders Johnson County to the west. However, Douglas County is not included in the MSA.

b. Regional Demographics

Exhibits III-11 and III-12 show the region’s population growth from 1980 to 1990, and from 1990 to 1997. From 1980 to 1990, the MSA experienced a slight population growth that paralleled that of the nation. The most urbanized areas associated with Kansas City (Kansas and Missouri) showed the lowest growth (and in the case of Wyandotte County, a decline), while outlying suburban counties showed growth increases above the MSA and national average. The period between 1990 and 1997 generally saw these trends continuing, with the Kansas City MSA outpacing the rate of national population growth by 0.1 percent. Again, several of the suburban ring counties experienced the most dramatic growth, while areas closer to the city proper experienced decline or posted minor increases. Exhibit III-13 displays population projections that show these trends are likely to continue.

EXHIBIT III-11
POPULATION GROWTH, KANSAS CITY MSA, 1980-1990

Rank	County	1980	1990	Numeric	Annual
		Population	Population	Change	Percent
				1980 – 1990	Change
					1980 – 1990
1	Johnson County, KS	270,269	355,054	84,785	2.8%
2	Cass County, MO	51,029	63,808	12,779	2.3%
3	Platte County, MO	46,341	57,867	11,526	2.2%
4	Leavenworth County, KS	54,809	64,371	9,562	1.6%
5	Clay County, MO	136,488	153,411	16,923	1.2%
	<i>United States Total</i>	<i>226,542,204</i>	<i>248,709,873</i>	<i>22,167,669</i>	<i>0.9%</i>
	<i>Kansas City MSA</i>	<i>1,449,380</i>	<i>1,582,875</i>	<i>133,495</i>	<i>0.9%</i>
6	Miami County, KS	21,618	23,466	1,848	0.8%
7	Clinton County, MO	15,916	16,595	679	0.4%
8	Lafayette County, MO	29,931	31,107	1,176	0.4%
9	Ray County, MO	21,378	21,971	593	0.3%
10	Jackson County, MO	629,266	633,232	3,966	0.1%
11	Wyandotte County, KS	172,335	161,993	(10,342)	-0.6%

Source: CERI, Kansas City Metro Market Profile, 1998.

Exhibit III-14 provides information about the 1995 per capita income of residents within the eleven-county MSA. The statistics show that, while the MSA as a whole enjoys a higher per capita income than the national average, there is a wide disparity between some of the affluent suburban counties and some of the urban core and rural fringe areas. Johnson County residents enjoyed a per capita income of \$32,909 in 1995. This was considerably above the MSA and national averages, and almost double the per capita income of Ray County (Missouri), whose residents had the lowest 1995 per capita income in the MSA (\$16,822).

The 1995 employment statistics shown in Exhibits III-15 through III-17 provide insight into the employment and business growth occurring in the Kansas City MSA, as well as of the employment sectors area residents are engaged in. Between 1985 and 1995, employment in the MSA grew by 192,195. This growth of 2 percent was slightly above the national growth rate of 1.9 percent (Exhibit III-15). Six of the 11 counties in the MSA outpaced the national average for employment growth, while ten of the eleven counties posted positive growth totals. Only Wyandotte County experienced a decline between 1985 and 1995, but even this drop was less than a 0.1 percent change.

EXHIBIT III-12

POPULATION GROWTH, KANSAS CITY MSA, 1990-1997

Rank	County	1990 Population	1997 Population	Numeric Change 1990 - 1997	Annual Percent Change 1990 - 1997
1	Cass County, MO	63,808	77,896	14,088	2.9%
2	Leavenworth County, KS	57,867	70,176	12,309	2.8%
3	Platte County, MO	57,867	68,680	10,813	2.5%
4	Johnson County, KS	355,054	417,336	62,282	2.3%
5	Clay County, MO	153,411	174,035	20,624	1.8%
6	Clinton County, MO	16,595	18,620	2,025	1.7%
7	Miami County, KS	23,466	26,190	2,724	1.6%
	Kansas City MSA	1,576,371	1,709,273	132,902	1.2%
	United States Total	248,709,873	267,636,061	18,926,188	1.1%
8	Ray County, MO	21,971	23,216	1,245	0.8%
9	Lafayette County, MO	31,107	32,524	1,417	0.6%
10	Jackson County, MO	633,232	647,973	14,741	0.3%
11	Wyandotte County, KS	161,993	152,627	(9,366)	-0.8%

Source: CERI, Kansas City Metro Market Profile, 1998.

EXHIBIT III-13

POPULATION GROWTH, KANSAS CITY MSA, 1997-2010

Rank	County	Estimated 1997 Population	Projected 2010 Population	Numeric Change 1997 - 2010	Annual Percent Change 1997 - 2010
1	Johnson County, KS	417,336	533,308	115,972	1.9%
2	Cass County, MO	77,896	97,847	19,951	1.8%
3	Platte County, MO	68,680	84,807	16,127	1.6%
4	Clay County	174,035	202,318	28,283	1.2%
	Kansas City MSA	1,709,273	1,913,452	204,179	0.9%
	United States Total	267,636,061	297,716,000	30,079,939	0.8%
5	Leavenworth County, KS	70,176	77,384	7,208	0.8%
6	Miami County, KS	26,190	27,839	1,649	0.5%
7	Jackson County, MO	647,973	670,860	22,887	0.3%
8	Ray County, MO	23,216	23,958	742	0.2%
9	Lafayette County, MO	32,524	33,000	476	0.1%
10	Clinton County, MO	18,620	17,953	(667)	-0.3%
11	Wyandotte County, KS	152,627	144,178	(8,449)	-0.4%

Source: CERI, Kansas City Metro Market Profile, 1998.